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| 10/525,481 | 02/23/2005 | Christoph Herrmann | DE 020200 | 4880 |

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BRIARCLIFF MANOR, NY 10510

EXAMINER

GUZMAN, APRIL S

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2618

| MAIL DATE | DELIVERY MODE |
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07/03/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/525,481 | Applicant(s) HERRMANN, CHRISTOPH | |
| | Examiner April S. Guzman | Art Unit 2618 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>08/25/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Response to Amendment***

The Examiner acknowledges the receipt of the Applicant's amendments filed January 5, 2007. Claims 1 and 6-9 have been amended and claim 2 has been withdrawn. Claims 1 and 3-9 are therefore currently pending in the application.

Response to Arguments

Applicant's arguments filed January 5, 2007 have been fully considered but they are not persuasive.

The applicant essentially argues, on page 6 and page 7 of the Remarks, that the reference of Ohkubo et al. does not appear to specifically teach the limitation that "the transmitting unit increases power when any of the communication devices transmits a power control command indicated a required increase in such power and the transmitting unit reduces transmission power only when all of the communication devices transmit a power control command indicating that a reduction of transmission power is possible." Amended claim 1 is read in its broadest reasonable interpretation.

Examiner respectfully disagrees because Ohkubo et al. teach when the minimum value of the received signal quality parameter value, C_{min} , is lower than the reference reception power value, C_{ref} , for example, $C_{min} = -5\text{dBm}$ and $C_{ref} = 0\text{dBm}$, then the reception power difference, $(C_{ref} - C_{min})$ is equal to $+5\text{ dBm}$ therefore the current transmission power of the multicast signal 4 is increased by the controller 17 (Figure 1, column 6 lines 23-28, and column 6 lines 38-46). When the minimum value of the received signal quality parameter, C_{min} , is greater than the

Art Unit: 2618

reference reception power value, C_{ref} , for example, $C_{min} = +5$ dBm and $C_{ref} = 0$ dBm, then the reception power difference, $(C_{ref} - C_{min})$ is equal to -5 dBm therefore the current transmission power of the multicast signal 4 is decreased by the controller 17 (Figure 1, column 6 lines 23-28, and column 6 lines 38-46).

Consequently, in view of the above teachings of Ohkubo et al. and having addressed Applicant's arguments, the previous rejection is maintained and made final by the Examiner.

Regarding the rejection of claims 3-5 and 7-9 under 35 U.S.C. 102(e). The Applicant's arguments are not persuasive in view of the sustained rejection of claim 1 explained above. The Examiner maintains her rejection of claims 3-5 and 7-9.

Regarding the rejection of claim 6 under 35 U.S.C. 103(a). The Applicant's arguments are not persuasive in view of the sustained rejection of claim 1 explained above. The Examiner also maintains that her obviousness rejection of claim 6 is proper.

For at least the reasons discussed above, the Examiner maintains her rejection of claims 1 and 3-9.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2618

2. **Claims 1-5, and 7-9** are rejected under 35 U.S.C. 102(e) as being anticipated by **Ohkubo et al. (U.S. Patent # 6,959,199)**.

Consider **claim 1**, Ohkubo et al. teach a method for controlling the transmission power employed by a transmitting unit (base station 11, 31, 51, 71, 91) for transmitting multicast signals (multicast signal 4) via a radio interface (uplink 32 of the radio link wherein the uplink 32 may be a channel of the radio link used for random access) to at least two communication devices (plurality of mobile stations 21, 41, 61, 81, 101) of a multicast group using a single physical channel (A multicast signal transmission power control method that controls a transmission power of a multicast signal that is transmitted by a base station to a plurality of mobile stations through a radio link.) (Figure 1, Figure2, Figure 4, Figure 5, Figure 7, column 1 lines 9-15, column 2 lines 25-33, column 2 lines 42-45, column 3 lines 7-10, column 4 lines 36-42, column 17 lines 40-43, and column 18 lines 62-65), wherein at least the communication device of said at least two communication devices receiving said multicast signals with the lowest quality transmits power control commands to said transmitting unit (transmitting a parameter signal, indicating the received signal quality parameter value, from the mobile stations to the base station through the radio link) (column 2 lines 42-58, column 5 lines 20-35, column 5 lines 58-67, column 7 lines 54-59, column 8 lines 16-22, column 10 lines 33-38, column 12 lines 52-58, column 16 lines 14-17, and column 17 lines 46-48), which power control commands indicate whether the transmission power employed by said transmitting unit for transmitting said multicast signals should be increased or reduced, and wherein said transmitting unit (base station) adjusts said transmission power based on power control commands received from at least one of said at least two communication devices (mobile stations) in a way that said power

Art Unit: 2618

control commands of said communication device receiving said multicast signals with the lowest quality have at least the most significant influence on said adjustment, (a power control value of each of the mobile stations is determined based on the received signal quality parameter values of the parameter signals received by the receiver and a transmission power controller controls the transmission power of the multicast signal that is sent to each of the mobile stations, based on the determined power control value. The transmission power of the multicast signal 4 is controlled by the transmission power controller 17 such that it is suited to the minimum value of the received signal quality parameter values received from the respective mobile stations 21.) (column 3 lines 1-6, column 3 lines 37-42, column 3 lines 46-53, column 4 lines 43-49, and column 6 lines 60-64) wherein each of said at least two communication devices transmits power control commands to said transmitting unit (transmitter 23, the carrier wave is modulated in accordance with the reception power, and the transmitter 23 transmits the parameter signal, indicating the reception power as the received signal quality parameter value, to the base station 11 through the uplink 32 of the radio link), and wherein said transmitting unit increases said transmission power employed for transmitting said multicast signals when any of said communication devices transmits a power control command indicating a required increase of said transmission power (when the minimum value of the received signal quality parameter values is lower than the reference reception power value and the reception power difference is a positive value then the current transmission power of the multicast signal 4 is increased by the controller 17. Wherein the reception power difference is supplied to the transmission power controller 17 as the power control value.) (Figure 1, column 6 lines 23-28 and column 6 lines 38-46) only when all of said communication devices transmit a power control command indicating

Art Unit: 2618

that a reduction of said transmission power is possible (when the minimum value of the received signal quality parameter values is greater than the reference reception power value and the reception power difference is a negative value then the current transmission power of the multicast signal 4 is decreased by the controller 17. Wherein the reception power difference is supplied to the transmission power controller 17 as the power control value.) (Figure 1, column 6 lines 23-28, and column 6 lines 38-46).

Consider **claim 3, as applied to claim 1 above**, Ohkubo et al. teach wherein each of said at least two communication devices (plurality of mobile stations 21, 41, 61, 81, 101) transmits a quality indication (received signal quality parameter value) to said transmitting unit (base station 11, 31, 51, 71, 91), which quality indication reflects the quality of multicast signals received at the respective communication device, wherein said transmitting unit requests the communication device providing the quality indication which reflects the lowest quality of received multicast signals to transmit in addition power control commands, wherein said communication device providing said quality indication which reflects the lowest quality of received multicast signals transmits upon said request power control commands to said transmitting unit, and wherein said transmitting unit adjusts said transmission power employed for transmitting said multicast signals according to power control commands received by said communication device providing said quality indication which reflects the lowest quality of received multicast signals (A reception power of a received multicast signal is measured by each of the mobile stations as being the received signal quality parameter value that is the base to determine a power control value of each mobile station, and a transmission power of the multicast signal of the base station with respect to each mobile station is controlled based on the power control value wherein the

Art Unit: 2618

power control value is indicated by an output signal of the determination unit of the base station. The transmission power of the multicast signal 4 is controlled by the transmission power controller 17 such that it is suited to the minimum value of the received signal quality parameter values received from the respective mobile stations 21.) (column 4 lines 43-49, column 5 lines 1-5, and column 6 lines 60-64).

Consider **claim 4, as applied to claim 3 above**, Ohkubo et al. teach said transmitting unit requests another communication device to transmit power control commands instead, when said transmitting unit detects that said other communication device transmits a quality indication which indicates the lowest quality of received multicast signals (When an error in demodulation of the received multicast signal is detected, each of the mobile stations transmits an automatic repeat request (ARQ) signal to the base station, and the transmission power of the multicast signal of the base station with respect to each mobile station is controlled depending on whether the ratio of the received ARQ signal to the total number of the mobile stations exceeds a predetermined ratio. When no error in demodulation of the received multicast signal is detected, each of the mobile stations transmits an acknowledge (ACK) signal to the base station, in order to confirm that the multicast signal from the base station is received at the mobile station without error. After modulation of the ARQ signal 104 or the ACK signal 105 is performed, the transmitter 23 transmits either the ARQ signal 104 or the ACK signal 105, to the base station 91 through the uplink 32 of the radio link.) (Figure 7, column 15 lines 8-20, and column 16 lines 14-17).

Consider **claim 5, as applied to claim 1 above**, Ohkubo et al. teach wherein each of said at least two communication devices transmits to said transmitting unit power control commands

Art Unit: 2618

and a quality indication, which quality indication reflects the quality of multicast signals received at the respective communication device, wherein said transmitting unit weights said received power control commands based on said received quality indications in a way that the power control command from the communication device providing the quality indication which reflects the lowest quality of received multicast signals obtains the highest impact, wherein said transmitting unit sums the resulting weighted power control commands, and wherein said transmitting unit adjusts said transmission power employed for transmitting said multicast signals according to said weighted and summed power control commands (In the base station 91 of the multicast signal transmission system, the signal counter unit 73 calculates a ratio of the number of received ARQ signals to the sum of the number of received ARQ signals and the number of the received ACK signals. The sum of the ARQ signals number and the ACK signal number is equal to the total number of mobile stations 101. When the ratio of the ARQ signal number to the total number of mobile station 101 exceeds the predetermined ratio, the signal counter unit 93 outputs a first power control signal to the transmission power controller 17 so as to increase the current transmission power of the multicast signal 4.) (Figure 7, and column 16 lines 48-59).

Consider **claim 7, as applied to claim 1 above**, Ohkubo et al. teach a transmitting unit (base station 11, 31, 51, 71, 91) comprising means for carrying out the transmitting unit related steps (a base station that uses the transmission power control method for the transmission of the multicast signal) (Figure 1, Figure 2, Figure 4, Figure 5, Figure 7, column 1 lines 9-15, column 2 lines 34-41, column 2 lines 59-67 through column 3 lines 1-6, column 4 lines 50-57, column 5

Art Unit: 2618

lines 5-19, column 6 lines 12-33, column 7 lines 30-38, column 9 lines 61-67 through column 10 lines 1-24, column 12 lines 17-26, and column 15 lines 34-49).

Consider **claim 8, as applied to claim 1 above**, Ohkubo et al. teach communication device (mobile station 21, 41, 61, 81, 101) comprising means for carrying out the communication device related steps (each of a plurality of mobile stations according to the transmission power control method) (Figure 1, Figure 2, Figure 4, Figure 5, Figure 7, column 4 lines 36-42, column 5 lines 20-33, column 7 lines 39-53, column 10 lines 24-38, column 12 lines 41-58, and column 15 lines 64-67 through column 16 lines 1-17).

Consider **claim 9, as applied to claim 1 above**, Ohkubo et al. teach communication system (multicast signal transmission system) comprising a transmitting unit (base station 11, 31, 51, 71, 91) with means for carrying out the transmitting unit related steps and at least two communication devices (mobile station 21, 41, 61, 81, 101) with means for carrying out the communication device related steps (Figure 1, Figure 2, Figure 4, Figure 5, Figure 7, column 4 lines 29-31, column 6 lines 65-67, column 9 lines 33-35, column 11 lines 49-51, and column 15 lines 1-3).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2618

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ohkubo et al.** (U.S. Patent # 6,959,199) as applied to claim 1 above, in view of **Lee et al.** (U.S. Patent Application Publication 2003/0125068).

Consider **claim 6**, as applied to **claim 1** above, Ohkubo et al. teach power control commands (power control values) that indicate whether the current transmission power should be increased or reduced (when the minimum value of the received signal quality parameter values is lower or higher than the reference reception power value and the reception power difference is a positive or negative value then the current transmission power of the multicast signal 4 is increased or reduced by the controller 17) (Abstract, column 2 lines 45-58, column 3 lines 46-53, column 4 lines 43-49 and column 6 lines 38-46).

However, Ohkubo et al. fails to teach that the power control commands indicate whether the current transmission power should remain unchanged.

In the related art, Lee et al. teaches the power control commands preferably are increased/decreased/maintained at a predetermined amount ([0019], and claim 10).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Lee et al. into the teachings of Ohkubo et

Art Unit: 2618

al. for the purpose of obviating that the transmission power should neither be increased or decreased and should rather remain unchanged.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see PTO-892 Notice of References Cited).

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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Art Unit: 2618

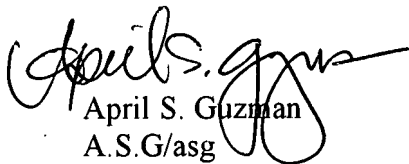
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to April S. Guzman whose telephone number is 571-270-1101. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

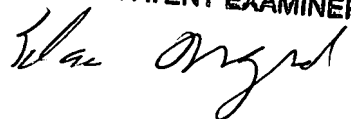
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


April S. Guzman
A.S.G/asg

06/11/07

EDAN ORGAD
PRIMARY PATENT EXAMINER

 6/19/07